Application Number: 10/665,206

Filing Date: September 22, 2003

Attorney Docket Number: 04173.0438

## **AMENDMENTS TO THE CLAIMS:**

Please amend claims 1, 6, and 14, and add new claims 15 and 16 as indicated below.

This listing of claims will replace all prior versions and listings of claims in the application:

## **LISTING OF CLAIMS:**

1. (Currently Amended) A method of manufacturing a semiconductor device,

comprising:

sectioning semiconductor elements from a semiconductor wafer to provide at least first

and second semiconductor elements, which has an element region formed on its front surface,

while keeping the sectioned first and second semiconductor elements in a state held by a holding

member;

picking up the sectioned first and second semiconductor element elements from the

holding member in order of their sectioning;

sticking an element adhesive film, which is sectioned according to the shape of one of the

semiconductor elements, to each of the back surfaces of the picked picked-up

first and second semiconductor element elements in order of their sectioning; [[and]]

sending the first and second semiconductor elements stuck to the element adhesive film

above a semiconductor device forming base material in order of their sectioning;

adhering the first semiconductor element to [[a]] the semiconductor device forming base

material by the element adhesive film; and

adhering the second semiconductor element on the first semiconductor element by the

element adhesive film.

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2. (Original) The method of manufacturing a semiconductor device according to

claim 1,

wherein the semiconductor element sectioning process has a process of sticking the

holding member to the back surface of the semiconductor wafer and cutting the semiconductor

wafer to form the sectioned semiconductor elements while keeping them in a state being held by

the holding member.

3. (Original) The method of manufacturing a semiconductor device according to

claim 1,

wherein the semiconductor element sectioning process has a process of forming modified

layers or grooves, which are deeper than the thickness of the semiconductor element, from the

front surface of the semiconductor wafer, a process of sticking a first holding member to the

front surface of the semiconductor wafer, grinding and polishing the back surface of the

semiconductor wafer and sectioning the semiconductor elements while keeping them in a state

being held by the first holding member, and a process of sticking a second holding member to

the back surfaces of the semiconductor elements and separating the first holding member.

4. (Original) The method of manufacturing a semiconductor device according to

claim 1, further comprising:

supplying a long element adhesive film from a supply roll and cutting the long element

adhesive film according to the shape of the semiconductor element by mechanical cutting or

laser cutting to form the sectioned element adhesive film.

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5. (Original) The method of manufacturing a semiconductor device according to

claim 1,

wherein the element adhesive film sticking process has a process of holding the sectioned

element adhesive film by a porous adsorption member and sticking the element adhesive film

being held by the porous adsorption member to the back surface of the semiconductor element.

6. (Currently Amended) A manufacturing apparatus of a semiconductor device,

comprising:

a pickup section for picking up [[a]] sectioned first and second semiconductor element

elements in order of their sectioning from a semiconductor wafer which has sectioned

semiconductor elements being held by a holding member;

a film sticking section for sticking an element adhesive film, which is sectioned

according to the shape of one of the semiconductor elements, to each of the back surface

surfaces of the picked-up first and second semiconductor elements; [[,and]]

a moving section for moving the first and second semiconductor elements stuck to the

element adhesive films above a semiconductor device forming base material in order of their

sectioning; and

an element adhesion section for adhering the first semiconductor element, to which the

element adhesive film is stack, to [[a]] the semiconductor device forming base material by the

element adhesive film and adhering the second semiconductor element on the first

semiconductor element by the element adhesive film.

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7. (Original) The manufacturing apparatus of a semiconductor device according to

claim 6,

wherein the film sticking section has a film supply section for supplying a long element

adhesive film from a supply roll and a film cutting section for cutting the long element adhesive

film supplied from the supply roll according to the shape of the semiconductor element by

mechanical cutting or laser cutting.

8. (Original) The manufacturing apparatus of a semiconductor device according to

claim 7,

wherein the film cutting section has an adsorption member for holding the element

adhesive film and a cutting mechanism for cutting the element adhesive film being held by the

adsorption member by stamping it.

9. (Original) The manufacturing apparatus of a semiconductor device according to

claim 8,

wherein the adsorption member is made of a porous metal.

10. (Original) The manufacturing apparatus of a semiconductor device according to

claim 7,

wherein the film cutting section has an adsorption member for holding the element

adhesive film, a laser cutting mechanism for cutting the element adhesive film being held by the

adsorption member, and a moving mechanism for moving the laser cutting mechanism or the

adsorption member according to the shape of the semiconductor element.

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11. (Original) The manufacturing apparatus of a semiconductor device according to

claim 10,

wherein the adsorption member is made of a porous metal.

12. (Original) The manufacturing apparatus of a semiconductor device according to

claim 6,

wherein the pickup section has an adsorption collet for holding the semiconductor

element and a push-up mechanism for separating the semiconductor element being held by the

adsorption collet from the holding member by pushing up the back surface of the semiconductor

element.

13. (Original) The manufacturing apparatus of a semiconductor device according to

claim 12,

wherein the adsorption collet is made of a porous metal.

14. (Currently Amended) The manufacturing apparatus of a semiconductor device

according to claim 6,

wherein the film sticking section has a film separation section for separating a protective

film, which is disposed on the back surface of the element adhesive film stack stuck to the

semiconductor element.

15. (New) The method of manufacturing a semiconductor device according to claim 1,

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wherein the second semiconductor element is stacked on the first semiconductor element

such that the second semiconductor element protrudes from the outside shape of the first

semiconductor element.

16. (New) The manufacturing apparatus of a semiconductor device according to claim 6,

wherein the second semiconductor element is stacked on the first semiconductor element

such that the second semiconductor element protrudes from the outside shape of the first

semiconductor element.

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